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Jameco Part Number 802708

FEATURES AND SPECIFICATIONS

Features and Benefits

- Supports both analog and digital signals
- Excellent EMI/RFI performance
- Plug and play interface
- LFH™ contact design is rugged and reliable
- DDWG DVI standard interface
- The digital section supports 4.95Gbps over a single link and 9.9Gbps over a dual link
- The MicroCross coax section supports a high-bandwidth of up to 2.5 GHz analog signal

Reference Information

Product Specification: PS-74320-001

Packaging: 71781—Bag

74320—Tray

UL File No.: E29179

CSA File No.: LR19980

Mates with: [88741](#), 74323 and other plug components

Designed In: Inches

Electrical

Voltage: 40V

Current: 3.0A

Contact Resistance: 20mΩ max.

Dielectric Withstanding Voltage: 500V

Insulation Resistance: 1000 MΩ min.

Mechanical

Contact Retention to Housing: 1 lb. min.

Insertion Force to PCB: 10 lb. max.

Mating Force: 10 lb. max.

Unmating Force: 2.2 lb. min.

Durability: 100 cycles

Physical

Housing: Glass-filled thermoplastic, UL 94V-0

Contact: Copper Alloy

Plating: Contact—30μ" Gold or Gold flash in contact area and

100μ" or 150μ" Tin/Lead in tail area over Nickel overall

Shields—100μ" bright Tin over Copper overall

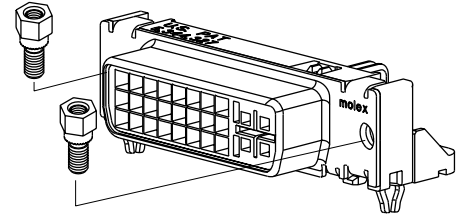
Operating Temperature: -20 to +85°C



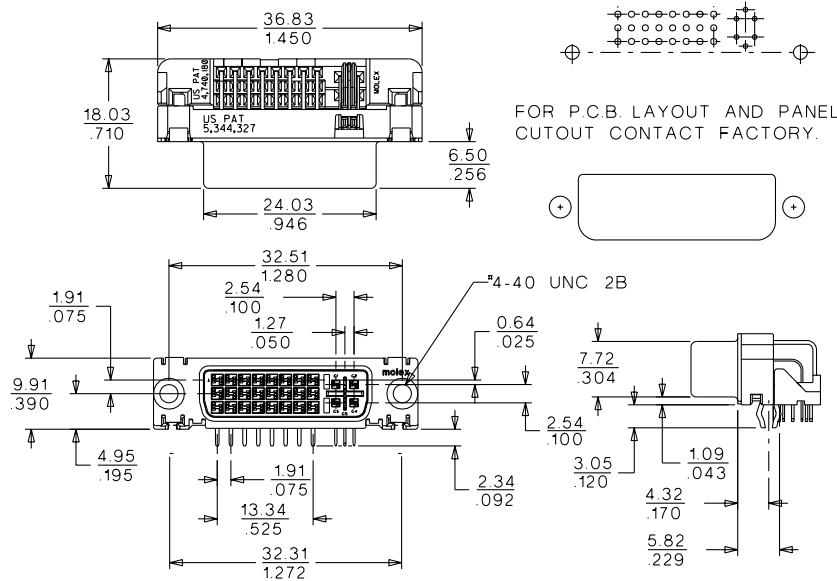
MicroCross™ DVI-I Digital/Analog Visual Interface Receptacle Header and Hardware

74320/71781

Panel Mount Through Hole Right Angle with Forklocks



CATALOG DRAWING (FOR REFERENCE ONLY)



ORDERING INFORMATION AND DIMENSIONS

Order No.	Description	Plating
74320-9010	Right Angle Receptacle with Forklocks	30μ" Gold
74320-9014	Right Angle Receptacle with Forklocks	Gold Flash
71781-0001	Jackpost	Clear Chromate
71781-0002	Self-Clinching Jackpost	Zinc/Yellow Chromate

Please contact Molex for additional tail length options



PRODUCT SPECIFICATION



LANGUAGE

English

3.0 Applicable Documents

3.1 Requirements of the cable assemblies covered by this specification are detailed in several documents. The order of precedence is as follows:

1. Molex P&D product drawings
2. PS-71182, Molex P&D product specification
3. PS-73785-001, Molex P&D Composite Cable Specification
4. ES-73814-9998, Molex P&D Cable Assembly Termination Specification
5. This cable assembly specification
6. VESA Plug and Display Standard

3.2 Reference Documents

EIA RS-364-(13, 20, 21, 23, 70) Electronics Industries Association, Recommended Standard

4.0 Product Drawings

- 4.1 P&D - P&D Cable Assembly Drawing
- 4.2 P&D Plug Assembly Drawing: Overall Dimensions
- 4.3 Exploded P&D Plug Components View
- 4.4 P&D Grounding System Drawing
- 4.5 P&D Plug Connector Drawing

REVISE ON PC ONLY		TITLE	P&D - P&D CABLE ASSEMBLY SPECIFICATION	
C	SEE SHEET 1			
REV		THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
DESCRIPTION				
DOCUMENT NO. PS-73814-9997		FILE NAME PS73814.SAM	SHEET 2	
ES-40000-3996 REV. A SHEET 4 95/MAR/10 EC U5-0926 DCBRD03.SAM				

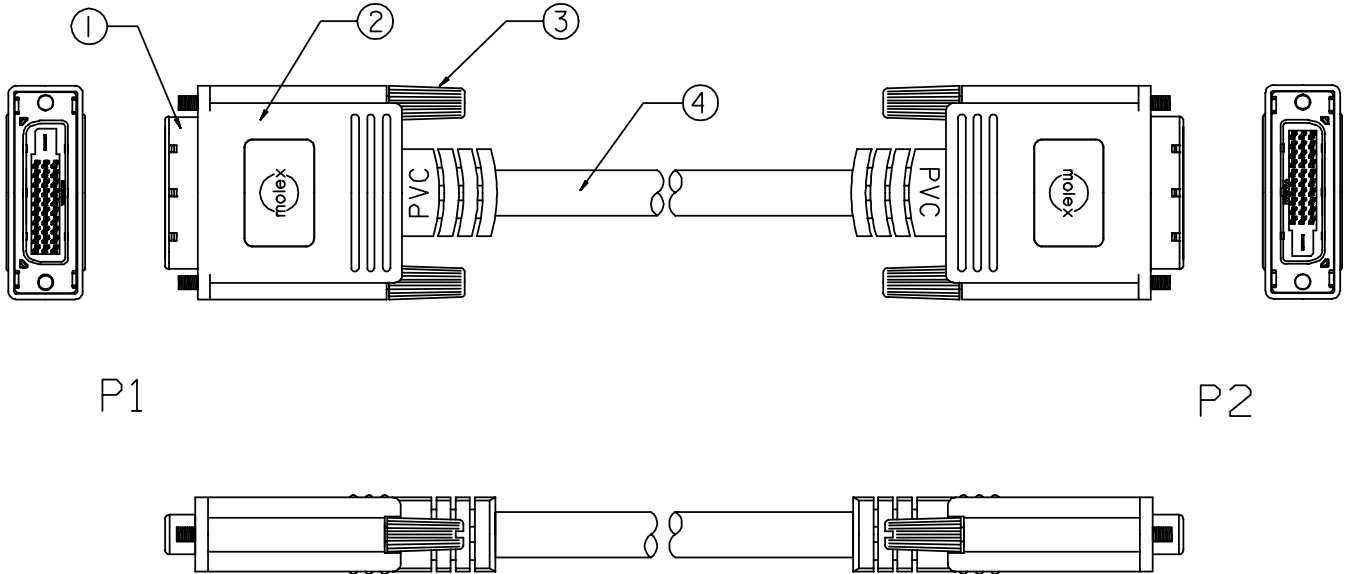


PRODUCT SPECIFICATION



LANGUAGE

English



P1

P2

4.1 P&D - P&D Cable Assembly

#	Component Description	Quantity	Materials	Refer to Molex Sales Drawing
1	P&D Plug Connector	2	Refer to section 4.5	Listed in section 4.5
2	Molded Boot	2	PVC	SD-73784-002
3	Jackscrew with cap	4	Steel with PVC cap	SD-71757-0002
4	P&D Shielded Cable	1	Refer to Molex P&D Composite Cable Specification PS-73785-001	

REVISE ON PC ONLY		TITLE	
C	SEE SHEET 1	P&D - P&D CABLE ASSEMBLY SPECIFICATION	
REV	DESCRIPTION	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
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ES-40000-3996 REV. A SHEET 4 95/MAR/10 EC U5-0926 DCBRD03.SAM			

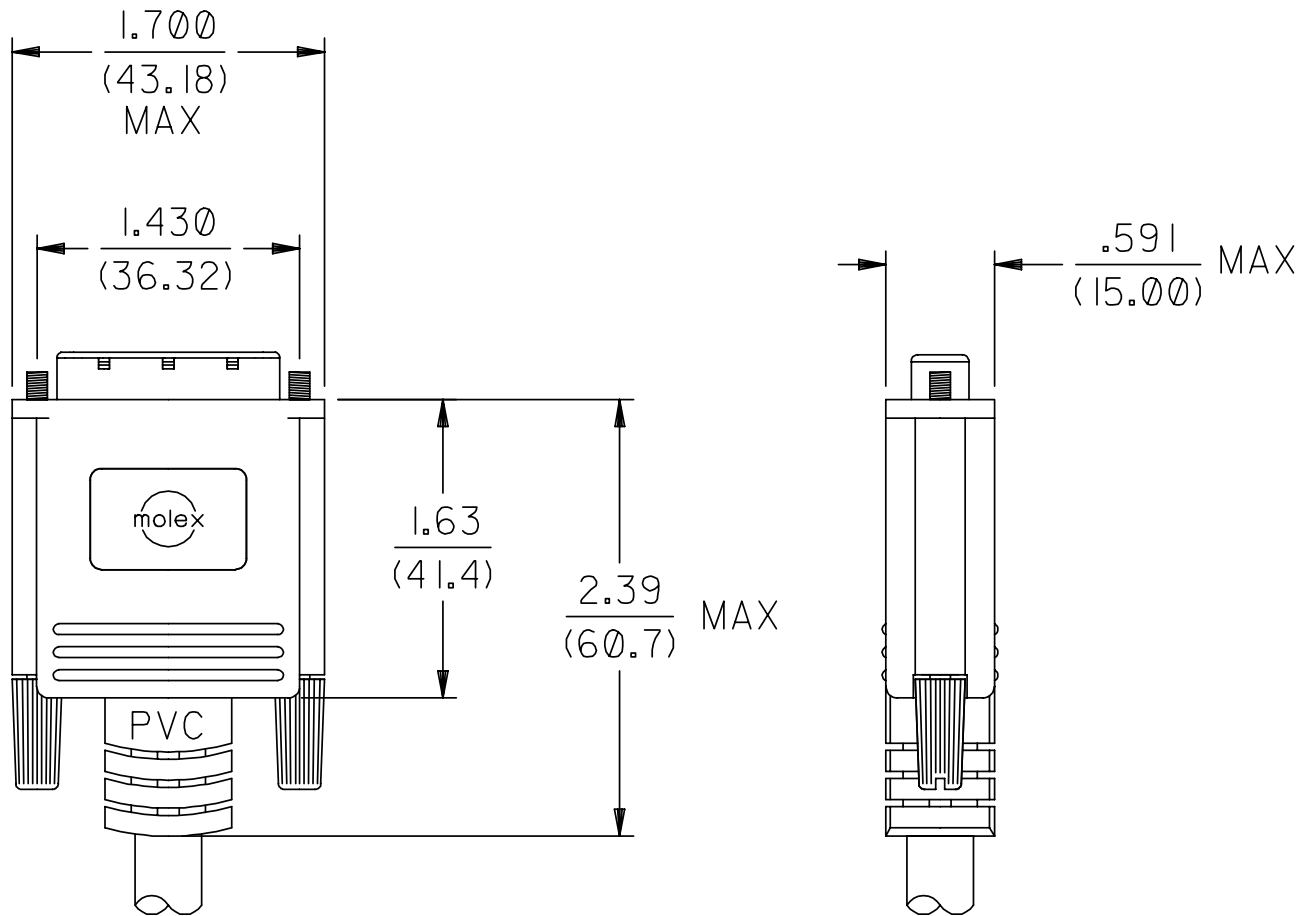


PRODUCT SPECIFICATION



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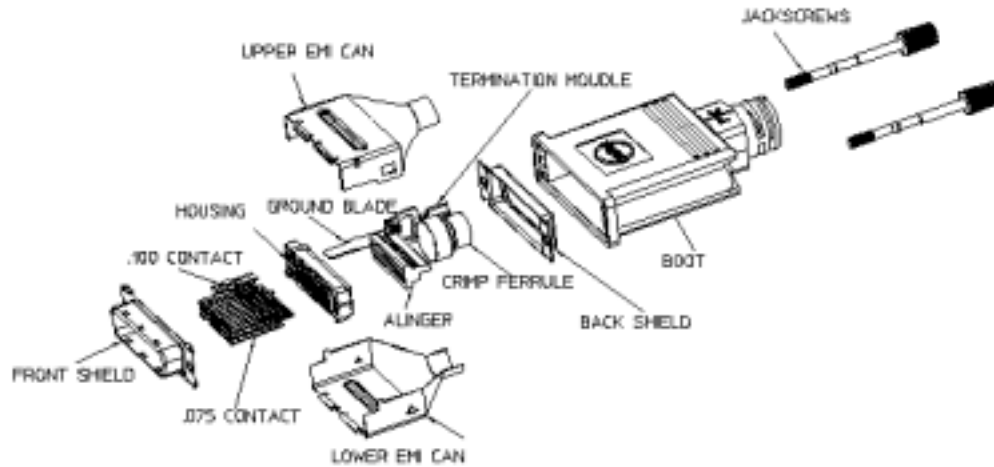
English



4.2 P&D Plug: Overall Dimensions

Note: units are inch over mm.

REVISE ON PC ONLY		TITLE	
C	SEE SHEET 1	P&D - P&D CABLE ASSEMBLY SPECIFICATION	
REV	DESCRIPTION	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
DOCUMENT NO. PS-73814-9997		FILE NAME PS73814.SAM	SHEET 4
ES-40000-3996 REV. A SHEET 4 95/MAR/10 EC U5-0926 DCBRD03.SAM			



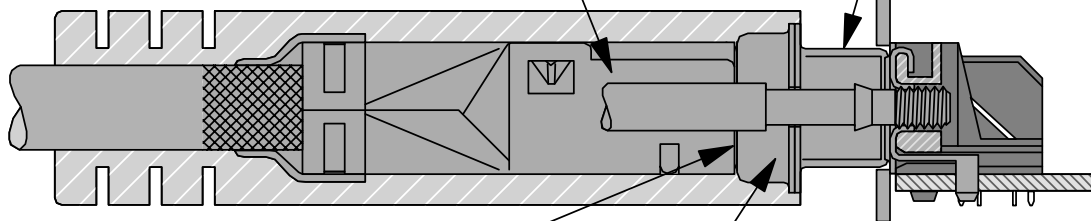
4.3 Exploded P&D Plug Components View

REVISE ON PC ONLY		TITLE	
C	SEE SHEET 1	P&D - P&D CABLE ASSEMBLY SPECIFICATION	
REV	DESCRIPTION	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
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EMI can halves contact each other with redundant dimples & through crimp ferrule

Mating interface of plug/receptacle shells
Multiple points of contact via detents



Hooks on EMI cans make reliable mechanical multi-point contact to the backshell

Backshell makes multi-point contact with the frontshell

4.4 P&D Grounding System

REVISE ON PC ONLY		TITLE P&D - P&D CABLE ASSEMBLY SPECIFICATION	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION
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REV	DESCRIPTION		
DOCUMENT NO. PS-73814-9997		FILE NAME PS73814.SAM	SHEET 6
ES-40000-3996 REV. A SHEET 4 95/MAR/10 EC U5-0926 DCBRD03.SAM			

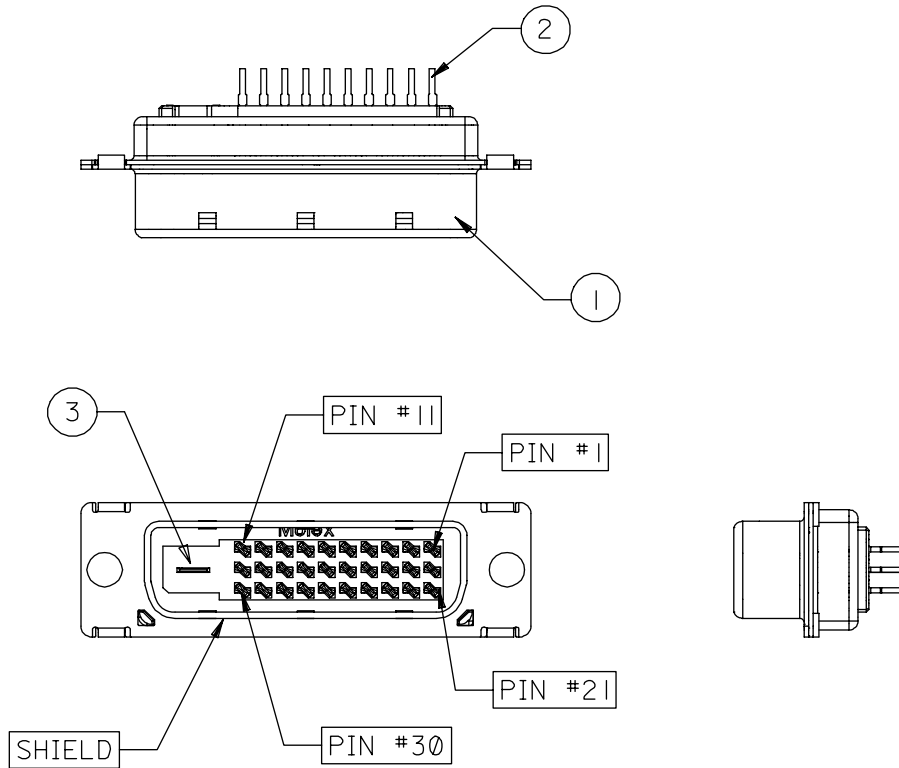


PRODUCT SPECIFICATION



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English



4.5 P&D Plug Connector

#	Component Description	Quantity	Materials / Finish	Refer to Molex Sales Drawing
1	Plug Subassembly	1	Shields: Steel, Tin (Sn) plated Housing: Glass Filled Polymer, Black, UL94V-0	SD-67485-001
2	EMI Shield Kit	1 set	Steel, Tin(Sn) plated	SDMS-71755-100*
3	Crimp Ferrule	1	Steel, Tin(Sn) plated	SD-73772-000
4	Boot	1	PVC	SD-73784-001
5	Jackscrew with Cap	2	Steel with PVC (cap)	SD-71757-0002

REVISE ON PC ONLY		TITLE	P&D - P&D CABLE ASSEMBLY SPECIFICATION	
C	SEE SHEET 1			
REV	DESCRIPTION			
DOCUMENT NO. PS-73814-9997		THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
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ES-40000-3996 REV. A SHEET 4 95/MAR/10 EC U5-0926 DCBRD03.SAM				



PRODUCT SPECIFICATION



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5.0 Wiring charts for standard cable types

Plug 1 Pin #	Signal Assignment	Basic & Sensing-CP	Basic, USB & Sensing-CP	Basic, USB, 1394 & Sensing-CP	Plug 2 Pin #
1	TMDS Data 2 +	Yes	Yes	Yes	1
2	TMDS Data 2 -	Yes	Yes	Yes	2
3	TMDS Data 2 return	Yes	Yes	Yes	3
4	N/C				4
5	N/C				5
6	N/C				6
7	TMDS Clock return	Yes	Yes	Yes	7
8	Sensing/Charge Power +	Yes	Yes	Yes	8
9	1394 pair A, data -			Yes	9
10	1394 pair A, data +			Yes	10
11	TMDS Data 1 +	Yes	Yes	Yes	11
12	TMDS Data 1 -	Yes	Yes	Yes	12
13	TMDS Data 1 return	Yes	Yes	Yes	13
14	TMDS Clock +	Yes	Yes	Yes	14
15	TMDS Clock -	Yes	Yes	Yes	15
16	USB Data +		Yes	Yes	16
17	USB Data -		Yes	Yes	17
18	Sensing/Charge Power return	Yes	Yes	Yes	18
19	1394 Vg / 1394 Drain			Yes	19
20	1394 Vp			Yes	20
21	TMDS Data 0 +	Yes	Yes	Yes	21
22	TMDS Data 0 -	Yes	Yes	Yes	22
23	TMDS Data 0 return	Yes	Yes	Yes	23
24	N/C				24
25	DDC return	Yes	Yes	Yes	25
26	DDC data (SDA)	Yes	Yes	Yes	26
27	DDC clock (SCL)	Yes	Yes	Yes	27
28	+5V dc	Yes	Yes	Yes	28
29	1394 pair B, clock +			Yes	29
30	1394 pair B, clock -			Yes	30
Shield	Outer Shield / USB Shield	Yes	Yes	Yes	Shield

REVISE ON PC ONLY		TITLE	P&D - P&D CABLE ASSEMBLY SPECIFICATION	
C	SEE SHEET 1			
REV	DESCRIPTION			
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PRODUCT SPECIFICATION

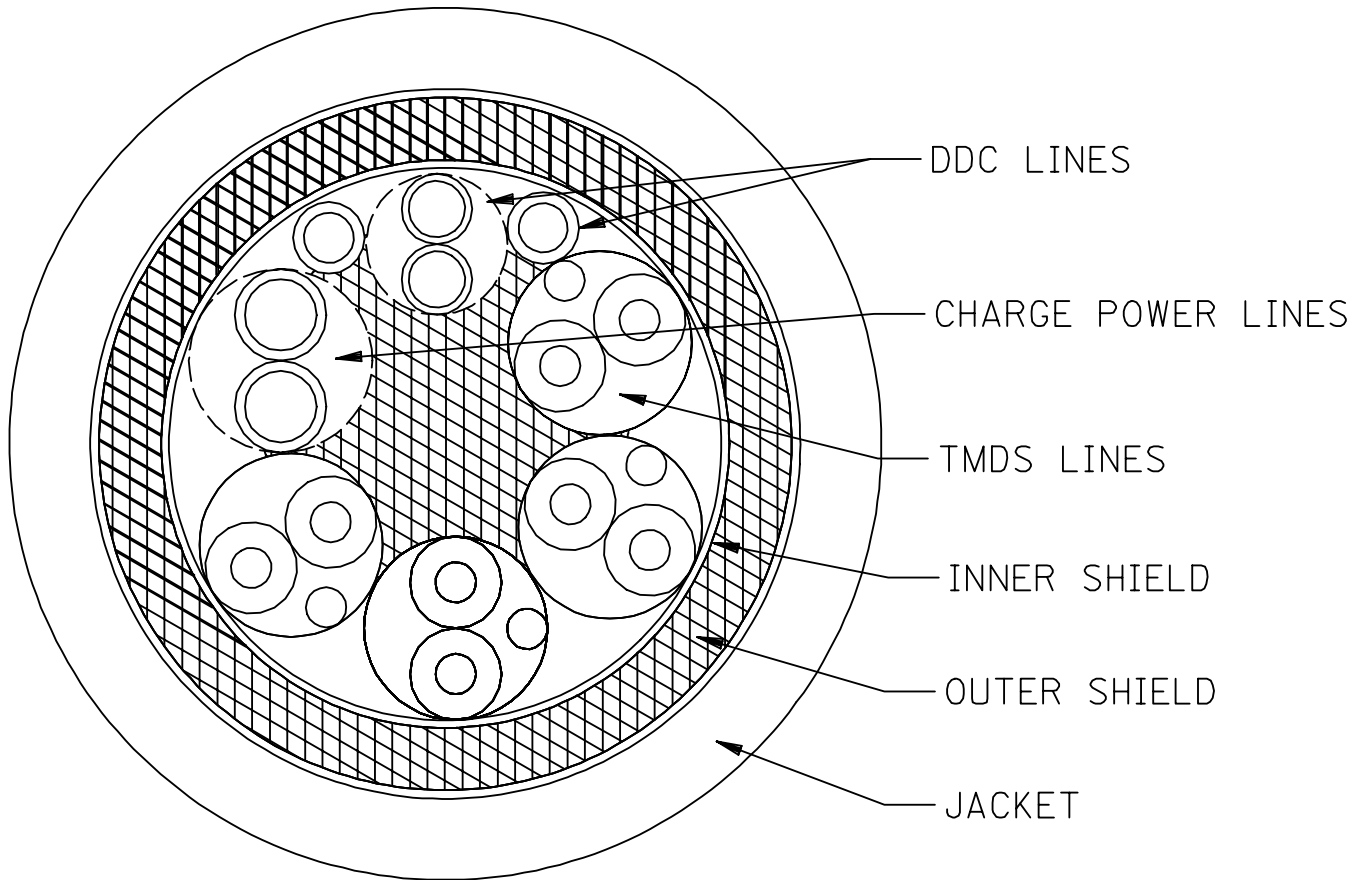


LANGUAGE

English

6.0 Cable Characteristics

6.1 Cable Drawing



P&D Basic & Sensing-CP Cable

This drawing is shown for reference only. Please refer to Molex P&D cable specification for specific drawings and detailed construction information

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C	SEE SHEET 1			
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PRODUCT SPECIFICATION



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6.2 Cable Specifications

	Item	Differential (TMDS) Lines	General Signal Lines
1	Rating	60° C, 30 V	
2	Conductor DC Resistance	0.10 Ω/ft (0.33 Ω/m) Nominal	28 AWG: 0.065 Ω/ft (0.21 Ω/m) Nominal 24 AWG: 0.025 Ω/ft (0.08 Ω/m) Nominal
3	Characteristic Impedance	100 ± 5 Ω @ TDR	Not specified
4	Insulation Resistance	50 MΩ-1000 ft (15 MΩ-Km) Minimum at 2° C	
5	Dielectric Strength	500 VDC for 1 minute	
6	Mutual Capacitance	14.0 pF/ft (59.1 pF/m) Nominal	Not specified
7	Inflammability	VW-1	
8	Weight	Refer to cable specification	
9	Marking	Refer to cable specification	

7.0 Product Characteristics

7.1 Cable Assembly Specifications

7.1.1 In Process Electrical Test Specifications

	Item	Conditions	Specifications
1	Insulation Resistance		100 MΩ
2	Dielectric Strength	Duration = 10 milliseconds	500 VDC
3	Continuity		2 Ω

7.1.2 Mechanical Specifications

	Item	Conditions	Specifications
1	Appearance	Refer to Molex process sheets for a specific assembly	
2	Examination of product	Refer to Molex process sheets for a specific assembly	
3	Cable Pull Force	20-25 lbs (89-111 N) for 30 seconds	No visible termination damage
4	Cable Flex	Per EIA 364-41, Condition 1	100 cycles in each of 2 planes

REVISE ON PC ONLY		TITLE	P&D - P&D CABLE ASSEMBLY SPECIFICATION	
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REV	DESCRIPTION			
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PRODUCT SPECIFICATION



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7.1.3 Environmental Specification

Environmental testing includes: Thermal Shock, Cyclic Humidity, Thermal Aging, and Corrosive Environment testing. Testing is typically performed between the mated header and cable assembly. Refer to Molex product specification PS-71182, Section 5.3, for more detail on these environmental specifications.

7.2 P&D Plug Connector Specifications

7.2.1 Electrical Specifications

	Item	Conditions	Specifications
1	Rated Voltage		40 VAC RMS
2	Rated Current	Per EIA-364-70 55° C max ambient	1.50 Amps per circuit 30° C max temp rise
3	Dielectric Strength	EIA 364-20, Method C, Unmated and Unmounted	500 VDC for 1 minute
4	Insulation Resistance	Measured after 500 VDC for 1 minute per EIA 364-21, Method C, Unmated and Unmounted	1 gigaohm minimum
5	Contact Resistance	Per EIA 364-23	20 milliohms maximum initial 10 milliohms maximum change

7.2.2 Mechanical Specifications

	Item	Conditions	Specifications
1	Mating Force	1 pair per EIA364-13	10.0 lbf (4.5 kgf) max
2	Unmating Force	1 mated pair per EIA364-13	2.2 lbf (1.00 kgf) min

7.2.3 Reliability Specifications

Reliability testing is typically performed between the mated header and cable assembly. Refer to Molex product specification PS-71182, Sections 5.2 and 5.3, for more detail on these specifications.

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PRODUCT SPECIFICATION



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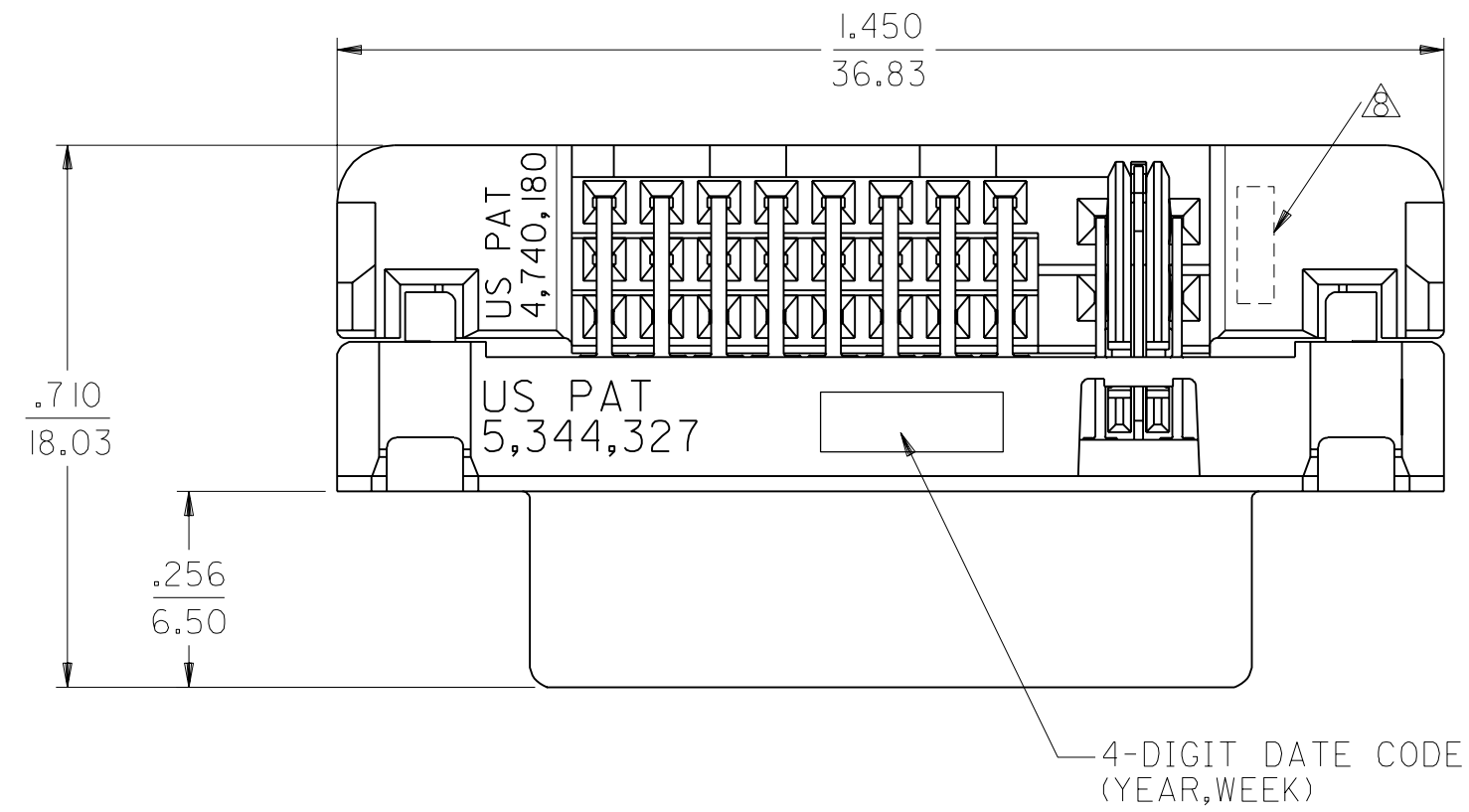
English

8.0 Packaging

Individual cable assemblies are tied and packaged in separate plastic bags. Refer to appropriate packaging specification for information on a specific cable's packaging .

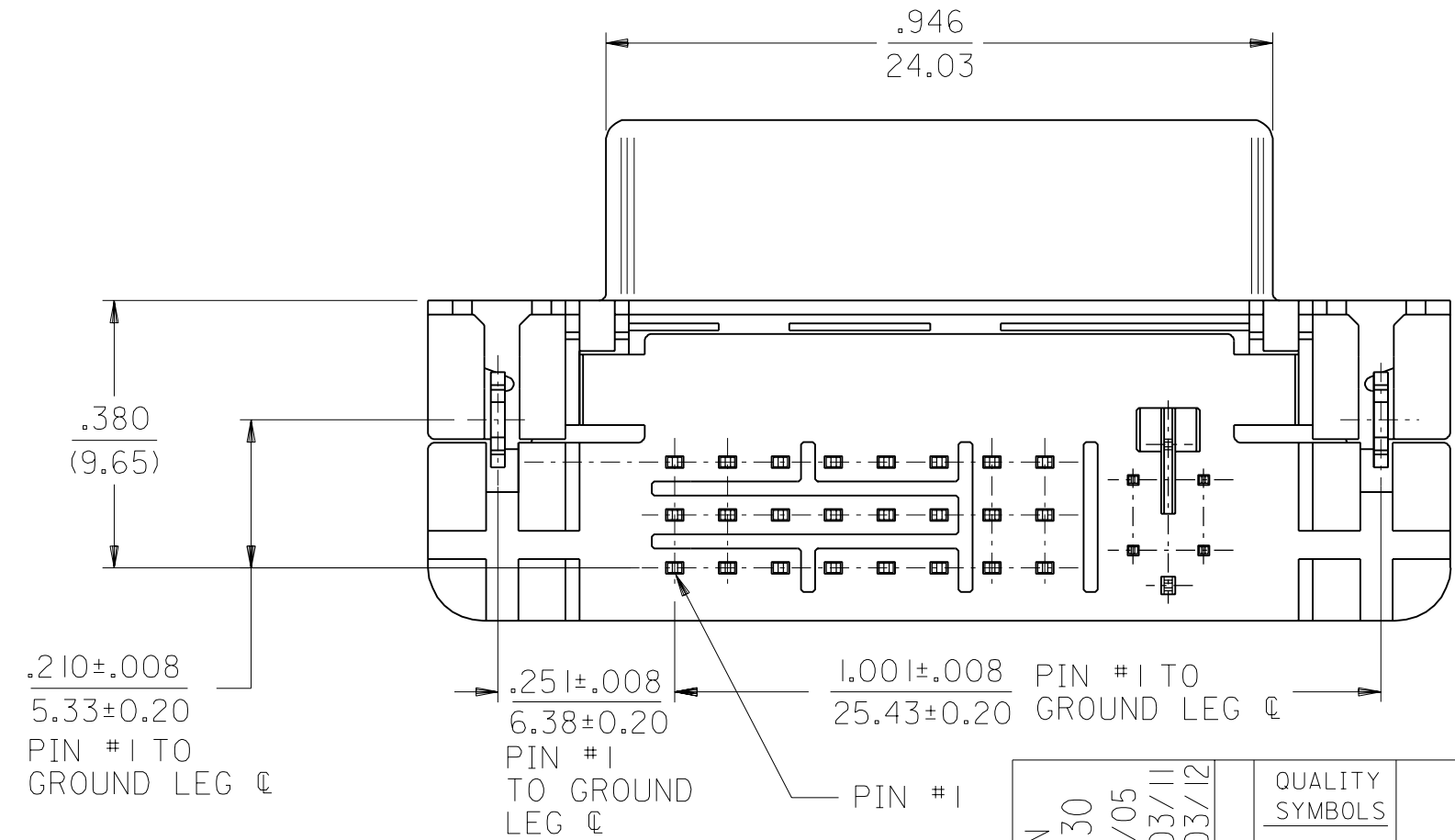
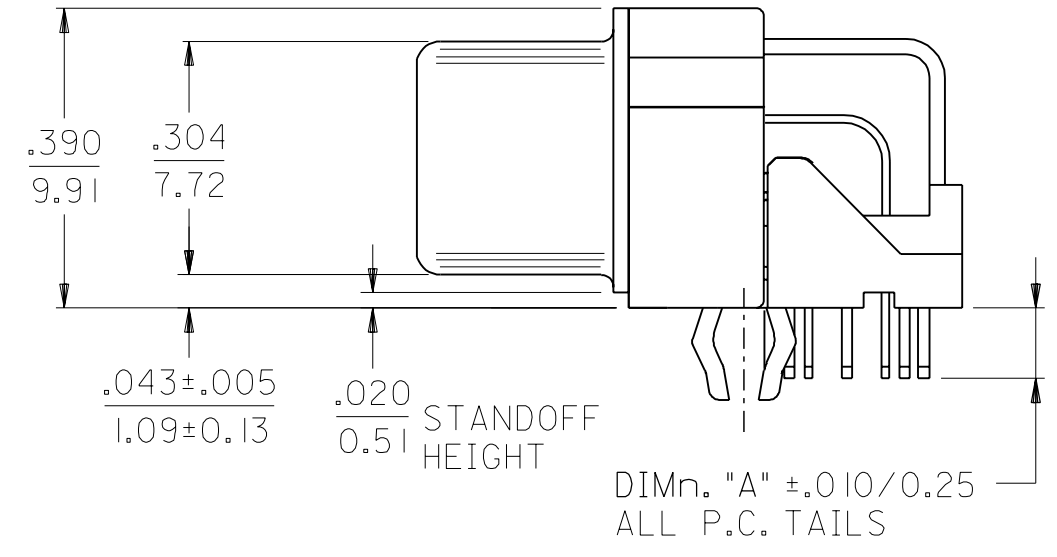
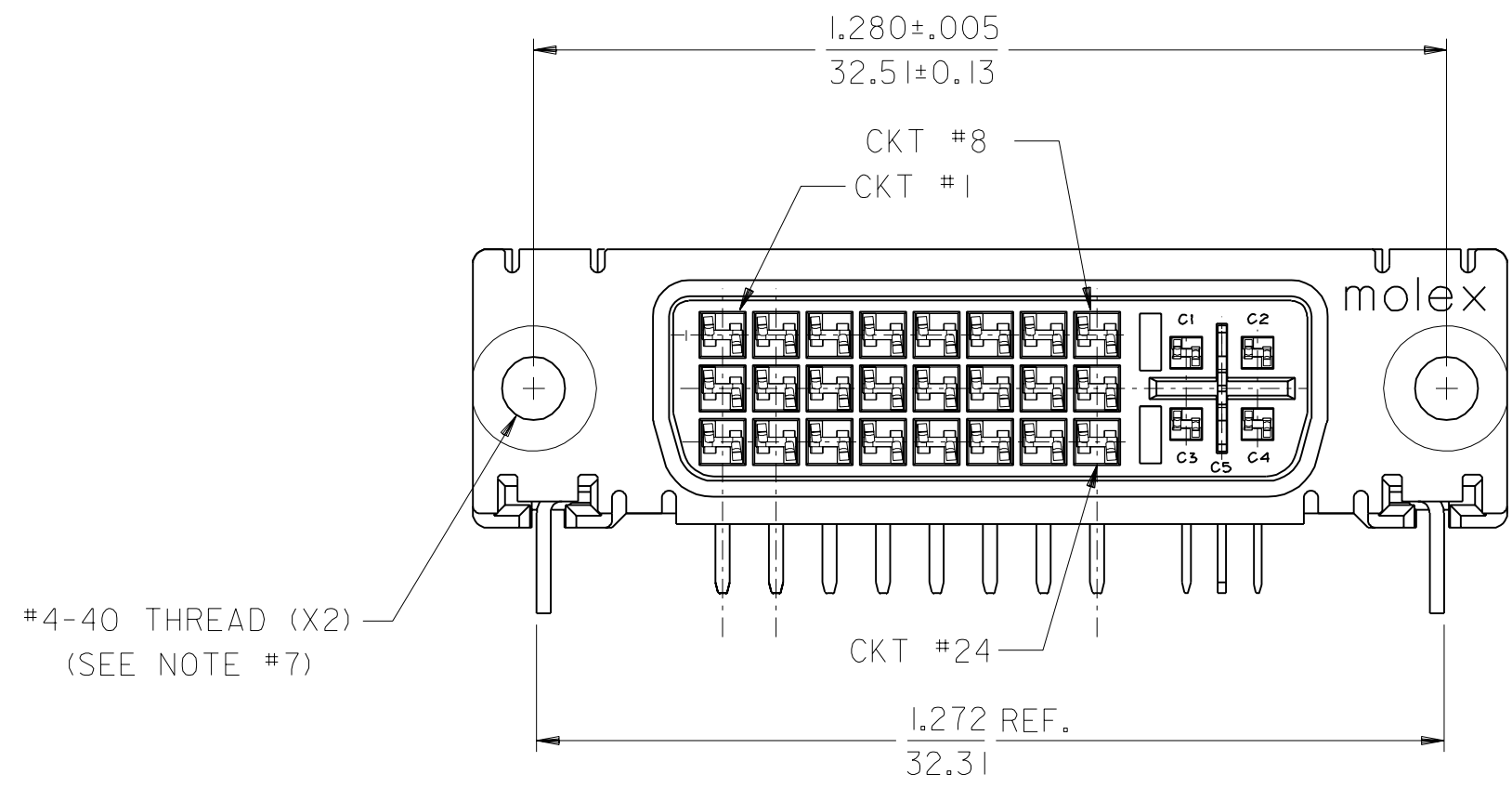
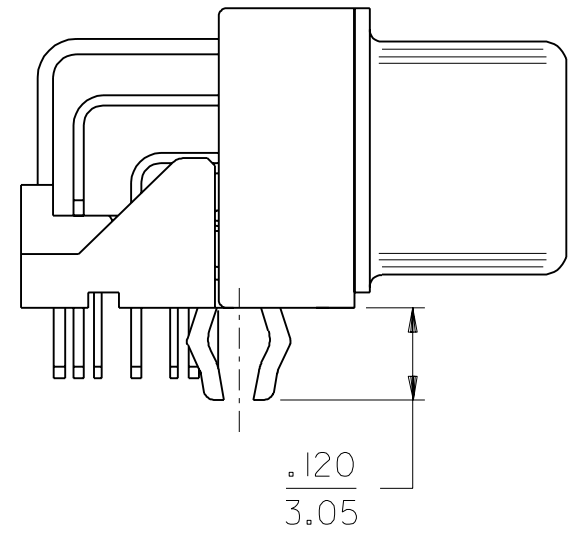
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DOCUMENT NO. PS-73814-9997			FILE NAME PS73814.SAM	SHEET 12
ES-40000-3996 REV. A SHEET 4 95/MAR/10 EC U5-0926 DCBRD03.SAM				

PART NUMBER	DIM "A"	PLATING OPTION
74320-9010	.092/2.34	1
74320-9014		2



NOTES:

- MATERIALS:
SHIELD -- DEEP DRAW STEEL.
HOUSING -- GLASS FILLED POLYMER, WHITE/NATURAL, UL 94v-0.
TAIL ALIGNER -- GLASS FILLED POLYMER, WHITE/NATURAL, UL 94v-0.
CONTACTS -- COPPER ALLOY.
MICROCROSS GROUND -- COPPER ALLOY.
 - PLATING: SEE SHEET 2
 - PRODUCT CONFORMS TO MOLEX PRODUCT SPECIFICATION NUMBER PS-74320-001.
 - SEE SHEET 2 FOR RECOMMENDED PANEL CUT-OUT AND P.C.B. LAYOUT.
 - PARTS WILL BE PACKAGED IN TRAYS PER PK-74320-010.
 - PRODUCT CONFORMS TO DDWG DVI SPECIFICATION. REFER TO THIS SPECIFICATION FOR CONNECTOR MATING DIMENSIONS.
 - RECOMMENDED MOUNTING HARDWARE IS MOLEX P/N 71781-0001 OR 82007-0300 OR 88780-6066. REFER TO PRODUCT SPECIFICATION NUMBER PS-74320-001 FOR THE APPLICATION TORQUE REQUIREMENT FOR ASSEMBLING MOUNTING HARDWARE.
- ⚠ CAVITY NO. AND MANUFACTURING PLANT CODE.



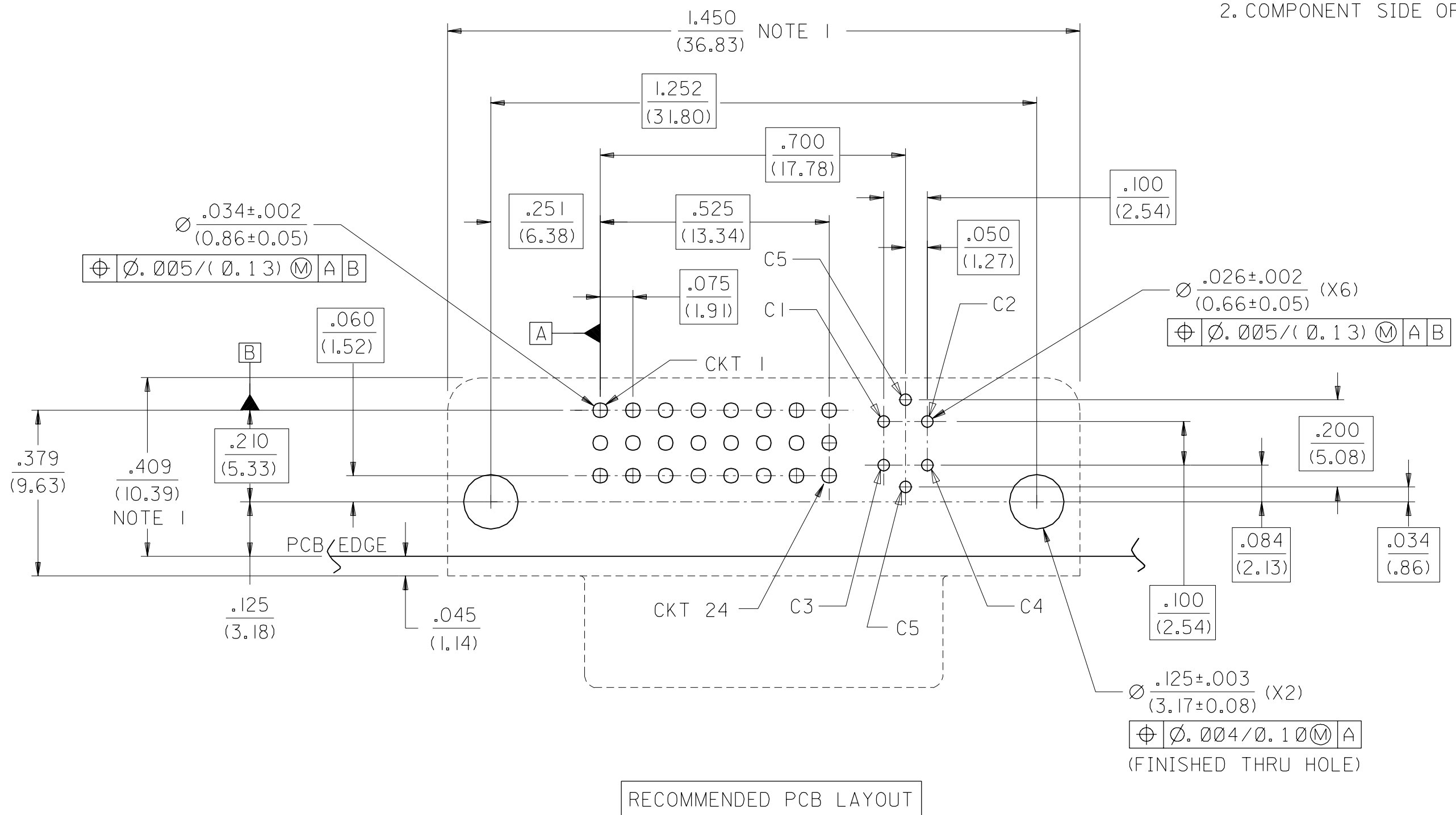
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DRWN: DXUE 04/03/05		CRITICAL = 0
CHK: HARVEY 04/03/11		
APPR: SHUANG 04/03/12		
REV	DESCRIPTION	
C		

GENERAL TOLERANCES: (UNLESS SPECIFIED)	
4 PLACES	±0.05
3 PLACES	±0.10
2 PLACES	±0.25
1 PLACE	±0.50
ANGULAR: ± 1/2°	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

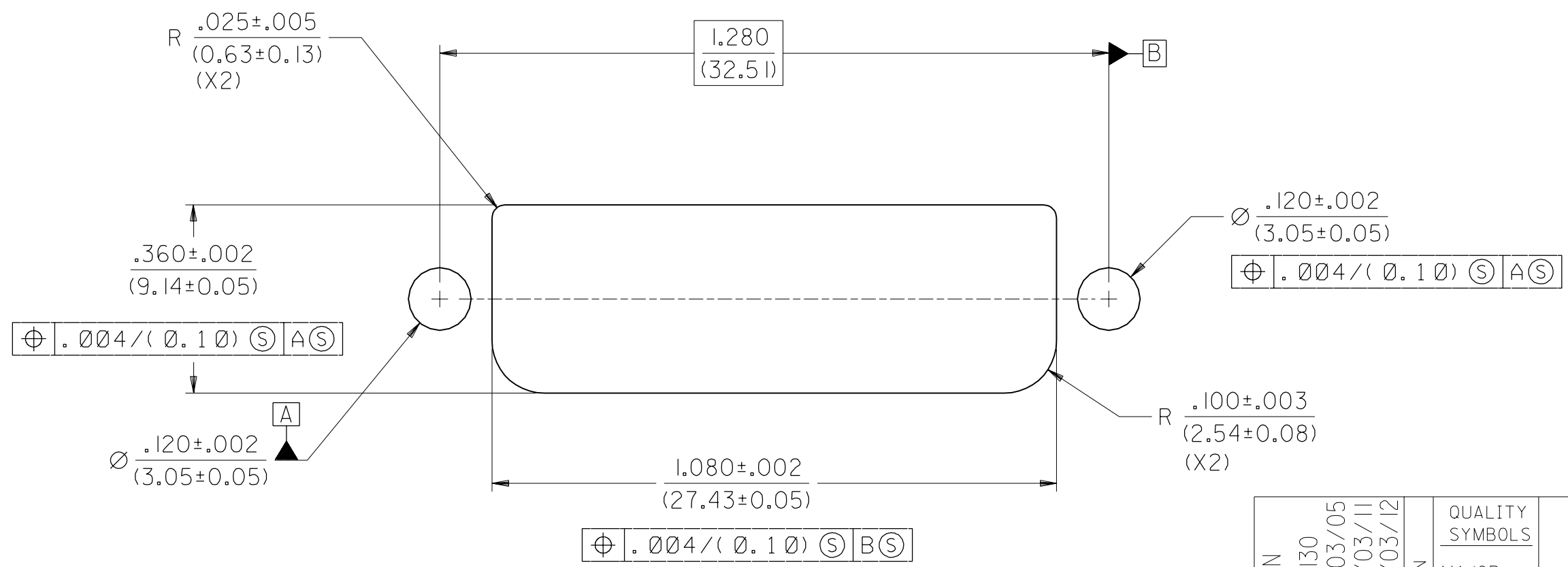
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CHECKED BY & DATE SCHMIDGA 99/11/16	
APPROVED BY & DATE NELSON 99/11/16	
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DIMENSIONS: <input type="checkbox"/> mm <input checked="" type="checkbox"/> INCH		SHT	REV
THIRD ANGLE PROJECTION		REVISE ON CAD ONLY	
TITLE: DVI - I RIGHT ANGLE RECEPTACLE CONNECTOR W/FORKLOCK			
MOLEX INCORPORATED			
CAD FILENAME SD74320026.SOI	MATERIAL NO. SEE CHART	DRAWING NO. SD-74320-026	SHEET NO. 1 OF 2
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.			SIZE C

NOTES:
 1. THESE DIMENSIONS REPRESENT CONNECTOR OVERLAY ON PCB.
 2. COMPONENT SIDE OF PCB SHOWN.



RECOMMENDED PCB LAYOUT



RECOMMENDED PANEL CUT-OUT

NOTE:
 1. PANEL THICKNESS: .030" - .040".

PLATING OPTIONS:

PLATING OPTION #1:

OUTER SHIELD -- 150u"/(3.75um) MIN. BRIGHT TIN OVER 50u"/(1.27um) MIN. NICKEL OVER COPPER FLASH
 .075"/(1.91mm) CONTACTS -- 30u"/(0.75um) MIN. SELECT GOLD AND 100u"/(2.50um) MIN. SELECT PURE TIN OVER 50u"/(1.27um) MIN. NICKEL OVERALL.

PLATING OPTION #2:

OUTER SHIELD -- 150u"/(3.75um) MIN. BRIGHT TIN OVER 50u"/(1.27um) MIN. NICKEL OVER COPPER FLASH
 .075"/(1.91mm) CONTACTS -- SELECT GOLD FLASH AND 100u"/(2.50um) MIN. SELECT PURE TIN OVER 50u"/(1.27um) MIN. NICKEL OVERALL.

MODIFICATION	DESCRIPTION	QUALITY SYMBOLS
EC NO. SH2004-0130	DRWN: DXUE 04/03/05	MAJOR = 0
CHK: HARVEY 04/03/11	APPR: SHUANG 04/03/12	CRITICAL = 0
REV		

GENERAL TOLERANCES: (UNLESS SPECIFIED)	
mm	INCH
4 PLACES ±0.	±.
3 PLACES ±0.	±.010
2 PLACES ±0.25	±.010
1 PLACE ±0.25	±.010
ANGULAR: ± 1/2°	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

SCALE 4 : 1	DESIGN UNITS <input type="checkbox"/> mm <input checked="" type="checkbox"/> INCH
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CHECKED BY & DATE SCHMIDGA 99/11/16	
APPROVED BY & DATE NELSON 99/11/16	
CAD FILENAME SD74320026.S02	

DIMENSIONS: <input type="checkbox"/> INCH ONLY <input checked="" type="checkbox"/> mm ONLY		SHT	REV
THIRD ANGLE PROJECTION		REVISE ON CAD ONLY	
TITLE: DVI - I RIGHT ANGLE W/FORKLOCK RECEPTACLE CONNECTOR			
MOLEX INCORPORATED			
MATERIAL NO. SEE CHART	DRAWING NO. SD-74320-026	SHEET NO. 2	
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.			
			SIZE C